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INSTITUTE OF
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EDITORIAL



The Responsibilities of Membership

When discussing the organisation of a society such as the Wireless Institute of Australia, the remark has often been heard that "Divisional Councils have this or that responsibility to members," and whilst accepting this fact, it is also obvious that individual members also have responsibilities to their Divisional Councils and to the Institute as a whole.

On reviewing this question, it becomes apparent that members' responsibilities embrace such things as supporting their elected representatives in promoting an active and energetic vitality in their Division's general life and group activities.

This interest can be most helpfully displayed by members in shouldering their share of the work to be done, rather than leaving everything to the few reliable workers who frequently bear more than their share of the load.

We feel sure that you will agree that even the largest Divisions find it difficult to obtain office-bearers and helpers at times, and very frequently the excuse offered by some is that the affairs of the Divisions are run by a clique who do not want newcomers to enter their select circle. Now we consider this to be rationalisation to say the least—newcomers with new ideas always help to improve the progress of an organisation, and the Wireless Institute is no exception in this regard.

When you consider that the privileges we enjoy today have been obtained for us by such organised

effort, there is no excuse for lack of enthusiasm by individual members in rising to the occasion when workers are in demand.

Have you ever stopped to examine the position, or to consider what unified control of Amateur activities has been achieved by the Wireless Institute of Australia—if so, you will have no difficulty in recognising that members have another responsibility insofar as it is their duty to obtain new members for their Division and thus strengthen our representation to the P.M.G.'s Department when we approach them on behalf of the Australian Amateur.

Departmental officers have often publicly expressed the opinion that the conditions under which we operate today have been obtained only because of the friendly contact which exists between the P.M.G. Department and our organisation. The Advisory Committees, which we originally sponsored, have helped, in no small measure, to maintain this relationship and to ensure a friendly solution to breaches of the regulations.

Will you therefore do your part by taking an active interest in Divisional affairs next time someone is required to undertake official duties, and also start right now by securing some membership allocation forms from your Secretary and making definite visits to non-members with a view to enlisting them in your Division.

FEDERAL EXECUTIVE

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807s As Floating Screen R.F. Amplifiers

BY B. HANNAFORD,* VK2ALR

THE circuit to be described came from experiments with 807s as r.f. triodes. One circuit used an 807 with the screen resistor and by-pass condenser connected to plate. Another used an r.f. by-pass condenser between control grid and screen, the screen resistor being connected in the usual way. Both these circuits will work, the idea being to parallel the required elements for r.f. but still have normal d.c. screen volts.

If you wish to experiment on these lines don't fail to remember there is a phase difference across the condenser so the elements are not really at the same instantaneous r.f. potential. With both these circuits neutralising will be required. A rather large capacity in the first circuit and a small capacity in the second circuit.

Using the second circuit, tests were made on the necessary capacity for the grid to screen condenser. Surprisingly, it was found that the condenser was apparently unnecessary. The circuit was quite stable with the screen floating. Now we have a third circuit with an un-by-passed screen grid and neutralised in the normal manner. For the want of a better name let's call this the floating screen circuit, the screen apparently having no definite r.f. potential. The circuit may be single ended or push-pull, the screens may be fed from a common resistor without trouble.

To sum up, the floating screen circuit is a normal tetrode circuit with neutral-

ising added and the screen by-pass taken out. It can be plate and screen modulated and the drive requirements are the same as for tetrode connection. In fact, you might almost consider it a tetrode circuit with the neutralising cancelling out the feed-back due to the un-by-passed screen.

Consider it as we do desire, but what we really want to know is what are the advantages of its use? From the limited number of tests possible before writing this article, it appears the circuit has more stability than the usual 807 tetrode circuit. Perhaps this circuit has the stability we have always wanted but so seldom got without a lot of trouble. Perhaps by now you are interested and want to try the floating screen circuit for yourself. If so, a few points worthy of mention are as follows.

As regards neutralising circuits, use grid, plate, or cross neutralising as you like, but the neutralising capacity is very small. To make things easier, boost the tube's grid-plate capacity with a small external condenser. Then it will be found that a reasonable size neutralising condenser can be used and adjustments are easier to make.

When using push-pull with cross neutralisation, the neutralising condensers should be approximately equal. However, one interesting fact was observed, the screen currents of the tubes were unequal; the tubes were changed over, but the same side of the circuit still had the highest current. The screen currents were balanced by increasing one neutralising condenser two turns and decreasing the other two turns.

However, this state of affairs may have been due to unequal grid-plate capacity loading mentioned earlier. The screen resistor should probably be located right at the tube or tubes, but three feet of lead did not seem to matter on 7 Mc.

— — — — —

ERRATUM IN RULES OF THE VICTORIAN 576 Mc. CONTEST

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VK2AEZ	10	2
VK3ZA	11	1
VK3GM	12	1
VK3ACL	14	1
VK3ABC	8	1

DR. A. L. GREEN

We record with deep regret the death of Dr. A. L. Green on 28th August, 1951. Dr. Green was born on 3rd February, 1905, at London, England. Educated King's College, London University, B.Sc. 1925, M.Sc. 1929. Investigator to Radio Research Boards, Councils for Scientific and Industrial Research Great Britain and Australia. Head of Commonwealth Ionospheric Prediction Service.

During his lifetime Dr. Green was foremost authority in Australia on Radio Propagation Phenomena and was instrumental in securing for the Institute the provision of the special chart which is published in this magazine each month. We Australians will always be indebted to "backroom" workers like Dr. Green whose untiring efforts to unravel the mystery of the ionosphere have helped in no small measure to remove the uncertainty from DX hunting. F.R.S. in particular will always rever the memory of Dr. Green for his work on behalf of the W.I.A.

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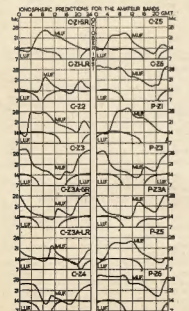
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PREDICTION CHART FOR OCTOBER, 1951



TELEVISION MADE EASY

Part ii.—How the Camera Works

BY JOHN JARMAN,* VK3ADA

As Hams, we are naturally more interested in the receiving side of television than the transmitting side, but in television, unlike sound broadcasting, one cannot learn the principles of reception without some knowledge of what takes place at the transmitting end. For this reason, the next two articles of this series will be devoted to television transmission, commencing with the camera.

Now so far, we've learnt that the camera takes photographs continuously at the rate of 25 per second, and splits each of these photographs into 625 horizontal lines, transmitting each of these, in succession, as a stream of electrical impulses, corresponding to the light and dark portions of each line. How does it do it?

Well, consider your domestic camera. It consists of a dark box, fitted with a lens, by which light rays, from a distant object, are focussed on to a film, where they cause chemical action, which produces the photograph.

Now a television camera also consists of a dark box with a lens, but instead of a film, the light is focussed on to a special "target" that turns light into electric current (Fig. 1).

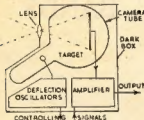


Fig. 1.

There are a number of different types of television camera in use, but to cover the general principles, it will suffice for us to deal with only one of them, and devote the rest of this article to the associated control equipment. (My, what a burst!)

First, let us study this 'ere target (Fig. 2). Contained in a vacuum glass bulb, it consists of a thin sheet of dielectric (e.g. mica), whose front surface is studded all over with minute particles of a special metal which gives off electrons when light shines on them, or, if you want to be technical, they are "photo-emissive." Although very close to each other, these particles don't touch one another, but resemble little islands.

On the rear surface of the target is a sheet of thin metal called the "signal plate," so that the aforementioned particles are like a lot of little condensers, joined to a common lead. After all, a condenser is simply two conductors with a dielectric between them, and in

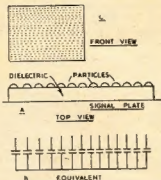


Fig. 2.

this case we have a particle and a signal plate, with a dielectric between them. Compare Fig. 2a and 2b, if this is not clear.

Now when light shines on the target, each little particle sheds a few electrons, the number depending upon the brightness of the light—so what? For a moment, we shall change the subject, and talk about condensers.

Consider a condenser, as shown in Fig. 3, with one plate connected to earth, through the resistor R. Now, remember, electricity is contained in everything, including plates X and Y, and when an object contains the correct number of electrons, it is said to be electrically neutral, as in Fig. 3a.

Let us now "rob" plate X of a few electrons, say two. Immediately, an equal number of electrons will "race" up from earth, through R, into plate Y, in an attempt to replace those taken from X (Fig. 3b). Let us now return to X the same number of electrons that we previously removed; in other words, we shall give X sufficient electrons to make it neutral. The extra electrons, which had gathered at Y, will at once realise that their service is no longer required, and "scram" back to earth, through R, so that a pulse of current flows through the latter.

Now consider a number of condensers, connected through a common resistor to earth, as in Fig. 4c, and suppose that from the upper plate of each condenser, a certain number of electrons be taken, as shown by the figures above. In each case, an equal number of electrons will enter the lower plate of the corresponding condenser, as in Fig. 3b.

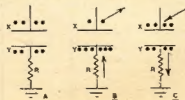


Fig. 3.

To each condenser, let us now give sufficient electrons to make it neutral. As each condenser is "satisfied," a number of electrons will flow down to earth, through the common resistor R, equal to the number taken by each condenser.

In other words, the common resistor will now carry a series of pulses of current, forming a pulsating d.c.

Having thus seen how pulsating d.c. can be produced by "discharging" a series of "charged" condensers (to use the correct electrical terms), let us now return to our television camera.

We have seen how light rays, focussed on the metallic particles on the target's face, cause each particle to emit electrons. Now for each electron emitted, an extra one will enter the signal plate, which is earthed through a resistor, just like the "common lead" we have been talking about.

Let's take a look at Fig. 4. "A" represents a typical line of the picture, as focussed on the target. (Refer back to last article, if necessary). "B" is a top view of the row of particles on the target, which will fall in this line.

Particles in the light parts will emit a lot of electrons, whereas those in dark parts will emit very few (note figures). "C" shows the condensers which these particles form.

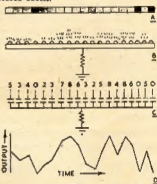


Fig. 4.

Now commencing from the left, suppose we discharge each of these condensers, by giving to each particle, in succession, sufficient electrons to make it neutral, i.e., the number it has lost. In each case, an equal number of electrons will leave the signal plate, and flow through R to earth, so that the current through R will be as graphed in Fig. 4d.

Therefore, our camera works, by first allowing the light to charge a lot of little condensers and then discharging them in succession.

But how does it discharge them in succession? Well, we saw in the last article how the electron beam of a cathode ray tube can be made to trace out a number of parallel horizontal lines. Suppose we put our target inside a cathode ray tube (Fig. 5) so that these lines will be traced out on the target's face.

Commencing at the top left-hand corner, the beam will now sweep across the top row of particles (Fig. 1c). Consisting of electrons, it will restore to each particle sufficient to make it neutral, i.e., the number it had previously emitted.

* A11426 L.A.C. Jarman, J.B., c/o S.L. Garden, Box 1424H, G.P.O., Adelaide.

The action reminds one of the act of passing a box of chocolates along a row of hungry "harmonics" seated at a matinee.

Just as each kid would grab sufficient "lollies" to satisfy his appetite, so does each particle collect sufficient electrons from the beam to restore neutrality. After completing each line, travelling from left to right, beam will "jump" back to the left hand side of the target, and trace out the following line, ultimately reaching the lower right hand corner when beam will return to its starting point. All of this takes place 25 times per second, and as the beam travels over each line, the action outlined in Fig. 4 will take place; so that a burst of pulsating d.c. will flow through the load resistor R (Fig. 5), from which the output is taken.

This type of camera is known in England as the emitron, and in U.S.A. as the Iconoscope, and it will be noted that the output is obtained by "electrostatic induction" (though I shall not bother you too much with this big word).

It might be mentioned that in other types of camera, the output is taken from the electron beam which, after scanning the target, is made to return to an anode. The losses, which the beam suffers, in restoring electrons to the target, cause changes in anode current, which represent the camera's output. An example of this type of camera is the Image Orthicon, which is so sensitive that it will photograph a scene in the light of a match! Its operation, however, is beyond the scope of these articles.



Fig. 5.—Emitron Camera Tube.

Having learnt the principle of operation of this type camera tube, we, as Ham, will be more interested in the associated equipment.

The tube is of course contained in a dark box, fitted with lens and optical accessories. The camera case contains two saw-tooth oscillators (horizontal and vertical) to operate the scanning beam, and a small amplifier, to "boost up" the tube's output, before it leaves the camera. In many types of camera, portion of the output is fed into a small viewing cathode ray tube, mounted in the back of the camera case, to act as a view-finder. Every camera is provided with headphones and microphones, which keep the cameraman in touch with the control room.

There are of course many other components in a television camera, but these are all we need bother about, in order to understand its operation, which is our main concern.

So far we've seen how the camera turns the picture into pulsating d.c. Before this picture signal can be used to modulate the transmitter, however, it undergoes some important modifica-

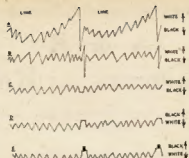


Fig. 6.

tions, some of which take place inside the camera, and others in the external equipment, as we shall see.

Let us first study the quality of this picture signal. Fig. 6a shows the signal as it leaves the tube. Note how it increases from left to right. This is called "Tilt and Bend" effect, and if not corrected, would cause the picture to appear brighter on one side of the screen than the other. Correcting signals, called "shading signals", are therefore mixed with the camera tube's output, which "flattens" it, as shown in Fig. 6b. Since the extent of this tilt and bend effect is constantly varying, the amplitude of these shading signals must be kept manually adjusted, to maintain correct balance.

Note also that at the end of each line, there is a high amplitude pulse, generated by the camera. This is removed, by applying suppressing signals (between lines and between pictures), so that the signal becomes as shown in Fig. 6c.

The picture contrast must also be constantly adjusted.

Theoretically, the camera tube's output at any black part of picture should be zero. Actually, however, the tube gives some appreciable output when a black portion is being scanned, so that if not corrected, black would be transmitted as grey, thus spoiling the picture contrast and general quality.

Furthermore, the tube's output, for black parts of the picture, does not remain constant, but varies appreciably.

Output must therefore be constantly adjusted, so that, briefly speaking, at any black part of the picture, no signal modulated the transmitter. This adjustment is called "setting the black level."

These faults are not common to all types of television camera, nor are they the only faults which television cameras suffer. There are plenty more, but these are probably the most common and have been mentioned here to illustrate the difficulty of keeping a good quality television programme on the air, compared with an ordinary sound broadcast.

Our signal, now "perfected," must be "inverted." We have seen that the brighter the picture, the greater will be the camera's output. In the last article, however, we learned that in Australia, negative modulation is to be used, so that arrangements must be made to ensure that the amplitude of the modulated carrier will decrease with picture brightness. In other words, the modulation system must be arranged so

that the darker the picture, the greater will be the carrier amplitude, as in Fig. 6d.

In the spaces between the lines, synchronising signals are inserted, as shown in Fig. 6e, but we'll treat this in more detail in the next article.

Now, we've said a lot about adjustments that are made to the camera's output, during transmission. Who makes them?

Well, between the camera and the transmitter there is a very important device, called the Camera Control Unit, consisting of a large control panel, containing monitor screens and many dials and switches. Most television broadcasts use more than one camera, and the Camera Control Unit is arranged so that for each camera, there is a monitor screen, and a separate set of controls. The c.c.u. operator must carefully watch the picture produced by each camera and keep the output adjusted, so that this picture maintains good quality. By means of fading controls, he can also select whichever camera is giving the best view of the scene, and fade one scene into the other, just as one sees on the movies. By means of a small telephone system, he can also issue the necessary instructions to the cameramen whose job is to keep their cameras trained on the scene and adjust the optical focus of their cameras.

Before closing, just a word about synchronisation. We learned in the last article how the receiver must work in perfect "step" with the camera. Now, likewise, all cameras in the studio must work in step with each other and of course the generators which provide the shading and suppressing signals, described earlier, together with the generator, which inserts the synchronising signals in the transmission.

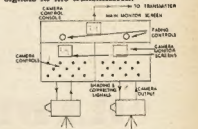


Fig. 7.

For this reason, all cameras and signal generators are controlled by a "master synchroniser" which may well be compared with the Sergeant Major, calling step to troops on the march, since the cameras, signal generators, and all receivers tuned in to the programme "take their orders" from this source, by keeping in step.

So far we've learnt how the camera turns the picture into electric signals, how the camera is controlled, and very briefly, how the receivers are kept "in step" with the camera. Before studying the receiver, we'll need to know more about the nature of these synchronising signals, which will be the subject of the next article.

Meanwhile, don't forget our query service. Mail your questions on Television to VK3ADA. The more we receive, the more we'll appreciate your enthusiasm. 73's till next month.

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A Single Tube V.F.O.

BY JAMES JACK,* VK2AGX

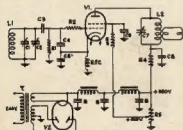
When the grid and plate circuits of a master oscillator are tuned to the same frequency, extensive isolation is necessary. But by tuning the plate circuit to twice the grid frequency, this difficulty is overcome and the use of isolator tubes avoided. This principle is employed in the following circuit.

This v.f.o. has been used here for some time with excellent results. Actually it came to me from VK2OQ, so if any honour is due for it, it belongs to Harry. Many chaps frown on single tube v.f.o.s, but we have not had any bad reports regarding the operation of this one.

The circuit is very simple, doubling from 3.5 to 7 Mc. in the tube itself.

The band set condenser C1 should be one with good bearings and heavy plates and once tuned to the correct frequency need not be touched again. It has been found that by pruning L1 till the plates of C1 are about two-thirds in mesh, best stability will be obtained. It is essential to keep L1 well away from the tube so that it will not be affected by heat from the tube, in fact it is a good idea to shield L1 in a separate compartment and put L2 and the tube in another section.

The circuit is quite flexible and here we found that by omitting the first filter condenser, thus making the filter choke input, and feeding the screen from a 50,000 ohm resistor from the full B+ (about 250 volts), that there was sufficient drive to drive an 807 on 7 Mc. Also a 50 pF. condenser was used in place of C4, a 100 ohm resistor for R2, earthing the rotor of C7 and capacity



C1—250 pF. variable (old b.c. type).

C2—25 pF. or less.

C3—150 pF. mica.

C4—25 pF.

C5—100 pF. (neg. coeff.)

C6—0.005 uF. mica.

C7—50 pF. variable.

C8—0.004 uF. mica.

R1—100,000 ohms.

R2—50 ohms.

R3—500 ohms.

R4—150 ohms. w.w.

R5—15,000 voltage divider.

RFC—2.5 mH.

T—385-0-385 b.c.l. transformer.

V1—6V8 or 6L6.

V2—80, 5V3, 5Y4, etc.

Coils—L1: 3.5 Mc., 18 turns, 18 gauge, on 1" former; L2: 7 Mc., 18 turns, 18 gauge, on 1" former.

coupling from the plate through a 250 pF. mica condenser to the grid of the next stage. If capacity coupling is used the length of the connecting line will effect the number of turns on L2. The longer the line, the less turns required.

DX C.C. LISTING

PHONE

Call	No.	Ctr.
VK3KE	10	155
VK3JD	11	155
VK3RU	3	143
VK4HR	13	145
VK3KW	13	145
VK3BZ	3	141
VK4KS	9	123
VK3LN	11	135
VK3D	9	135
VK3JE	7	123
VK4TP	14	115
VK3AWW	14	115
VK4WJ	17	104
VK4DO	20	104
VK4WF	21	103
VK3ADT	13	102
VK3AIA	13	102
VK3JF	16	101
VK3PJ	18	101
VK3QO	18	100
VK3IG	5	100

CW

Call	No.	Ctr.
VK3BZ	8	153
VK4EL	15	157
VK3F	3	153
VK3EO	2	153
VK3CN	1	151
VK4HR	13	145
VK3SW	28	130
VK3VW	4	143
VK3OL	6	141
VK3KB	13	138
VK3RU	18	135
VK3VW	16	135
VK3KX	23	133
VK3BO	32	129
VK4FJ	38	125
VK4FJ	11	135
VK4DO	20	135
VK3JE	21	134
VK3EK	3	133
VK3FH	31	119
VK3JI	35	118
VK3JH	19	116
VK3XK	30	114
VK4DA	7	113
VK3PL	36	110
VK7LZ	17	113
VK4QL	26	110
VK4BC	27	109
VK3YD	27	109

OPEN

Call	No.	Ctr.
VK3BZ	8	153
VK4HR	13	145
VK3RU	18	135
VK3JE	12	130
VK3IG	5	100
VK3D	9	135
VK3KE	10	155
VK3BZ	13	145
VK4EL	15	157
VK4DO	20	135
VK4FJ	38	125
VK4KE	24	140
VK3PL	36	110
VK3LN	11	135
VK3ADT	13	102
VK3AIA	26	120
VK3AIA	9	128
VK3AIAH	30	125
VK3NS	18	123
VK3HT	41	123
VK3JH	35	118
VK7LZ	23	116
VK3AWW	45	115
VK3JA	43	114
VK3ADT	14	113
VK3QO	45	113
VK3PG	47	111

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Quiz

1. Neglecting and effect, calculate the length of a half wave aerial for operation on six megacycles.
2. Define the following—(a) mutual conductance, (b) A.C. plate resistance, (c) amplification factor, (d) secondary emission.
3. A capacitor of 4 microfarads, connected across a 50 cycle supply, has a reactance of 796 ohms. What would be the reactance if the capacity was changed to 2 microfarads?
4. What, in metres per second, is the nominal speed at which radio waves travel?
5. What is the wavelength in meters of a signal frequency of 4 megacycles?
6. If a homodyne transmitter increases frequency by 0.07%, what is the frequency increase in cycles?
7. If two coils, each having an inductance of 1 henry, are connected in parallel, what is the total inductance?
8. For what percentage of each input cycle does plate current flow in a class "B" amplifier?

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CONTESTS

Remembrance Day Contest

The 1951 Remembrance Day Contest has successfully concluded with a larger number of participants than of previous years, indicating the desire of the Australian Amateur to honour the memory of those keys silenced forever whilst in the service of their country.

This Contest is unique in the annals of Amateur Radio in that no glory is attached to the individual, irrespective of the number of points scored by leading stations in each State, thus providing one of the rare occasions when the elusive DX is of no interest and giving one the opportunity of having short contacts with other VKs, many of whom we have known on Service. Not that the Contest is confined to Service personnel by any means—on the contrary this was exemplified by the large number of contacts which took place between the old-timers.

This year the Contest appeared to be more popular than ever, numerous calls being heard for the first time. VK9 stations were particularly active, operating on all bands from 3.5 Mc. to 30 Mc., thus providing a greater number of points than of other years. Of the calls heard for the first time, many were newcomers to the Amateur ranks—operating in their first Contest—the standard of operating being quite good. A number of stations did not make full use of the available bands—the 28 Mc. band being somewhat neglected—although those who persevered on this band were amply rewarded for their patience.

It is anticipated that the final scores will be published in the November issue of "A.R."

Jubilee Relay Contest

By the time these notes are published the Jubilee Relay Contest will have concluded and every corner of the earth should have been appraised of the fact that Australia is celebrating its Jubilee as a Commonwealth.

Radio Australia and other Empire Shortwave Networks have contributed to the publicity given the activities of the Australian and New Zealand Amateur, many requests being received for copies of the rules and log sheets. In addition, a talk will be given over the Australian Broadcasting Commission's National Network on the "Jubilee VK-ZL DX Contest" in News Review during the first week of October.

Jubilee VK-ZL DX Contest

All Amateurs in Australia and New Zealand should have now received a copy of the Rules and Log Sheet; any who have not, or any additional copies if required, can be obtained from Divisional Secretaries.

With reference to the rules, it has been suggested that an ambiguity could arise regarding the interpretation of the words "British Isles Prefix." These prefixes are G, GC, GD, GI, GM, and GW—not G2, G3, G4, etc.

In the Receiving Section, Rule 3 should read: "... the strength and tone of the calling station." As set out in the Log Sheet and "A.R." it reads, "called station."

The trophies illustrated on this page are for the Open, Phone, and C.W. Sections. Certificates or medallions will be awarded for the winners on various bands.

The success of the 1951 Jubilee VK-ZL DX Contest depends on YOU! Don't forget to send in your log sheets irrespective of the number of contacts made, and don't forget to send them in early. The Committee has done its

part in publicising this Contest to the world, and it is fervently hoped that conditions will be on the side of all those participating.

Remember, the C.W. Section commences at 0001 G.M.T., 13th October, concludes 1200 G.M.T., 14th October; Phone Section commences 0001 G.M.T., 20th October, concludes 1200 G.M.T., 21st October. Your logs should be in Sydney not later than 30th November. (Foreign logs not later than 31st January, 1952.)

In conclusion, the Jubilee Federal Contest Committee would like to thank Allen Fairhall, VK2KB, who is a member of the House of Representatives at Canberra, for his interest in pressing the Amateurs' case for recognition during the Jubilee Celebrations and obtaining thereby a monetary grant from the Commonwealth. The Committee also extend its thanks to W.I.A. Divisional Officers and Officers of the N.Z.A.R.T. who assisted so capably with the distribution of the Rules and Log Sheets.

Operating in R.D. Contest

My memories of the Contest are just a complete haze. I sat down at my operating position in the shack, and with three freshly sharpened pencils, together with ten clear sheets of paper, I prepared to do battle with all the other entrants in the battle of the numbers. I'm sorry, the Remembrance Day Contest.

Calling CQ Contest, in my best Rose Park manner, I prepared sedately to enter the first number received. Ten seconds, numbers, call signs, and a couple of log sheets. When I came to, I was laying on the mat in the passage with my wife throwing water on me, and my daughter wearing a very worried look on her face, was asking what was the matter.

My wife, in a very resigned voice, explained to her that Dad was in a Contest and had become a little confused. My daughter said, "A radio contest?" When my wife said "yes," my daughter lost interest with the words, "oh, that explains it all."

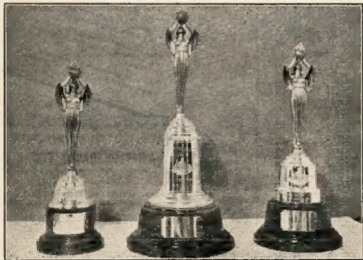
Nothing daunted, I girded my loins and with restored vigor, started throwing numbers at all and sundry. The next time that I went to the mat, my wife's mother who was visiting us had joined in the water throwing, and seemed to be getting quite a kick out of it. She was telling my daughter in an aside, "your father was always a little queer, my dear, even when he was first called on your mother."

Gently rising to my feet, and sneaking in a sly kick in the shins to my mother-in-law, I forced myself back to the receiver and took a couple of hours more punishment before my spirit finally gave out, and as my wife tucked me into bed after saying my prayers, I never had enough spirit to snarler back, as she said, "Petals, you've had a busy day!"

Well, there you are, that is the Remembrance Day Contest for you, and whilst you may not have had such a hectic four or five hours as I did, I'll bet there were a couple of times that you would have willingly gone to the mat.

It was a grand contest, it meant renewing a lot of acquaintances that you had almost forgotten, and best of all, it is the finest way of paying homage to that gallant band of "Silent Keys."

—Pansy Parsons, VK4PS.

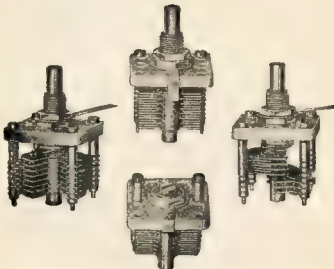


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- Cat. 584—34 x 34 pF. Butterfly, is suitable up to 100 Mc
- Cat. 585—Single Section 100 pF.
- Cat. 586—140 pF. Single Section.
- Cat. 587—15 x 15 pF. Butterfly.
- Cat. 588—27.5 pF. Single Section.
- Cat. 589—54 pF. Single Section.
- Cat. 476—15 x 15 pF Split Stator.
- Cat. 739—8 x 8 pF. Butterfly.
- Cat. 719—25 x 25 pF. Differential.
- Cat. 838—100 pF. Single Section double end plates for v.f.o. tuning, etc.

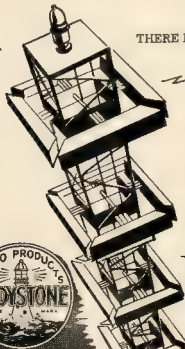


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114688 -	110592 "
229376 -	221184 "
458752 -	442368 "
917504 -	884736 "
1835008 -	1769472 "
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7340032 -	7077888 "
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469762048 -	452984832 "
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section requires four continents including Europe and eight countries. The third section requires five continents including Europe and 19 countries, while the fourth and final section requires six continents including Europe and sixteen different countries. The award is progressive and sections may be claimed progressively. Completion of the sections entitles the applicant to receive a special medal, silver-plated and stamped to indicate the holder. The reverse side of the medal is graven with the number of the fourth section diploma obtained. Certificates for each section are free but the medal costs 70s. Confirmations and applications for any of the sections should be submitted to this Bureau, and do not have to be forwarded to the R.E.P. The first VK winner of the complete sections and medal as far as is known is VK2DI.

Cards incoming to the Bureau during the month of August were well below the average in numbers and probably this is a reflection of the poor and erratic conditions prevailing on the DX bands for the past twelve months.

Interesting cards sighted during August are YU8BT, (ex-G3BZ), whose home QTH is J. E. Blore, 21 Fountain St., Leek, Staffs., England; MDPV, of Tripoli, Libya, or via R.S.G.B.

NEW SOUTH WALES

The August general meeting of the N.S.W. Division was held at Science House on Friday, 24th, with the President, John Moyle, in the chair. The attendance wasn't as good as usual as there were some vacant seats at the back. This may have been partly due to the fact that the monthly bulletin was not sent out this month and looks a wee bit like the "do-do" on present appearances. Surely everybody knows that the meeting night is on the fourth Friday though. This winking of the bulletin without notice in such precipitate fashion brought forth some criticism at the meeting, but when it was explained that the cost of production had soared to £175 per annum (including postage) and that it had to wait to press so early now that the contents were stale by the date of receipt, a motion was passed endorsing Council's action.

The meeting was unlucky enough to strike the zone blackout night and in consequence the first part of the proceedings were conducted in a dim religious kind of light emanating from two pressure lamps, until 8.45 p.m. Those who missed the meeting should proceed to kick themselves heartily, for they missed a treat.

Neve Williams 2XV was the highlight of the evening with his talk and demonstration on wire and tape recorders. After the lucid discourse we all know something about recorders at last, and after the demonstration we went home with that glow of satisfaction one derives from an evening well spent.

The versatility of the tape recorder from the viewpoint of editing and production was revealed by an excerpt from the well known farce, "The Mill Girl," on the platform with the assistance of Miss Ruth Plummer and Mr. Phil Watson, who kindly came along for the purpose. The lines were purposely scrambled somewhat to turn the recording of the show into a producer's nightmare, but with a few swift flips of the control, the mistakes were expeditiously wiped off the tape, and the recording taken up again from the interruption. The final edition was smooth as a baby's cheek with no trace of the stops and cuts.

The audience laughed until their sides and jaws ached at the next demonstration. A harmless recording of a Ham transmission on the 7 Mc. band was first played as it came over the air and then as "edited" by some of the boys

from the newspaper office. Lots of dreadful remarks and hilarious sound effects had been effectively injected. The demonstration concluded with an interesting companion of the same orchestral piece, firstly on the tape, then on a conventional home disc recording made by the President, and then on a commercial microgroove recording.

Don't forget the Annual Field Day at Woy Woy on Sunday, 18th November. Besides the usual Amateur attractions, a special programme has been arranged this year for the ladies and the youngsters. Also, don't forget to listen to the weekly VK2VW broadcasts for announcements of meetings and all other relevant news, especially now that the bulletin is in a state of—shall we say—suspended animation. This Division takes this opportunity to welcome Lyell Woolnough 3GW, one of the dyed-in-the-wool old timers, to the Council.

The Divisional sub-editor is grateful this month to 2YK and 3GW for items of news interest and "copy".

ST GEORGE ZONE

I have been listening on and off for the last month to try and hear some of the local boys on 30, but VKs were conspicuous by their absence, and as I have been very, very busy lately (exam, next Tuesday night, thank heavens), I have not been around to see the local lads. I would like to know if 2ASK, 2JZ, 2XW, 2SW, 2ALT, 2AIL, 2AGH, 2BN and 2AHV are still poking holes in the ether. If they are, I have not heard a single peep out of any of them.

2AGH and 2BN could of yore be heard DXing mostly at any time, but both are very quiet now. 2JZ, I believe, is now in JA land, and 2ASK and 2SW are cruising around the ocean somewhere, but what has happened to "All in Love"? He must be sick or something. Heard 2SA on 10 recently, but not once did I hear anybody come back to his CQ—keep trying, Will! Also heard 2XX on v.h.f. making contacts now and then.

Listening on 20 has been very "dead" and I have not been able to listen on 40, 240 volts on the aerial coil did not improve things at all. Anyhow, boys, I will be around to see you after Tuesday each month so if you hear or know of news or items of interest for these columns, keep it in mind for me. Most of you know my QTH: 84 Carlton Cres., Kogarah Bay.

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3500 Kilocycles 20 cycles low		
3530 " 40 " "		
3560 " 25 " "		
3590 " 35 " "		
3620 " 30 " "		
3650 " 52 " "		
3680 " 20 " "		
3710 " 45 " "		
3740 " 45 " "		
3770 " 60 " "		
3800 " 18 " high		

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- Test conditions 130 Kc/s. 10 V. R.M.S.
- INSULATION RESISTANCE: Greater than 5,000 Megohms at 1,500 V. D.C. at temperatures up to 100°C .
- WORKING VOLTAGE: 500 V. D.C. or 250 V. R.M.S. A.C. (20 cps-60 cps).
- TEST VOLTAGE: 1,500 V. D.C.
- DIELECTRIC: Unilator K3000.

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CTH 310	1,000 pF	0.18"	0.4"
CTH 310	1,500 pF	0.18"	0.4"
CTH 310	2,200 pF	0.18"	0.4"
CTH 310	3,300 pF	0.18"	0.6"
CTH 310	4,700 pF	0.18"	0.6"
CTH 422	6,800 pF	0.22"	0.9"
CTH 422	10,000 pF	0.22"	0.9"

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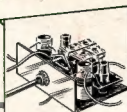
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